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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,526	08/20/2001	Brian Mitchell Bass	RAL920010018US1	5840
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IBM CORPORATION PO BOX 12195 DEPT YXSA, BLDG 002 RESEARCH TRIANGLE PARK, NC 27709			EXAMINER JUNTIMA, NITTAYA	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/933,526

Applicant(s)

BASS ET AL.

Examiner

Nittaya Juntima

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/20/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore,
 - the first, second, and third logic apparatuses in claims 2-6,
 - the threshold setting apparatus in claim 9 (if distinct from the threshold apparatus in claim 1 or the threshold circuit 130 in Fig. 1, see the specification on page 6, lines 23-page 7, lines 2, and 9-11),
 - the update transmit rate register in claim 10 (see the specification on page 6, lines 17-18),
 - the queue monitoring and computing apparatuses (if distinct from the threshold apparatus in claim 11 or the threshold circuit 130 in Fig. 1, see the specification on page 6, lines 21-23)must be shown in Fig. 1 or the feature(s) canceled from the claim(s). No new matter should be entered.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 126 and 128 in Fig. 1.
3. The drawings are also objected to because reference number “134” labeled as “UPDATED TRANSMIT RATE” should be changed to “119” and relabeled as “UPDATED TRANSMIT RATE REGISTER” to be consistent with the specification on page 6, lines 22-23, and the lines connecting Q, T1, and T2 to the “UPDATED TRANSMIT RATE REGISTER”

element in Fig. 1 should be reconnected to the “THRESHOLD CIRCUIT” 130 and an additional line should be added to connect the “UPDATED TRANSMIT RATE REGISTER” to the “THRESHOLD CIRCUIT” 130 to be consistent with the specification on page 7, lines 9-11, and page 6, lines 22-23, respectively.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:
 - on page 7, line 1, “132” should be changed to “134;”
line 2, “134” should be changed to “132;”

line 9, "134" should be changed to "130"

- on page 14, line 18, "132" should be changed to "130."

Appropriate correction is required.

Claim Objections

5. Claims 1-11, 13, 15, 17, 19, and 21 are objected to because of the following informalities:

- in claim 1, line 6, "rates" should be changed to "rate;"
- in claims 2-10, line 1, "receiver" should be changed to "system;"
- in claims 2 and 3, line 3, "the inequalities" should be changed to "inequalities: " and

where appropriate, the legends for T1, Qmax, and T2 should be added;

- in claim 3, line 3, "likewise" should be deleted;
- in claim 5, line 4, "between thresholds" should be deleted;
- in claim 6, line 4, "between thresholds is" should be deleted;
- in claim 8, both "an" and "a" should be changed to "the" to be consistent with claim

1;

- in claim 11, lines 7-9, "Q" should be changed to "the storage apparatus" since threshold is established in the storage apparatus not occupancy Q, and occupancy level Q can be compared with T1/T2, not the storage apparatus;

line 10, "data storage" should be changed to "Q";

- in claims 13 and 17, lines 3-4, "the maximum" should be changed to "a maximum" and "where Qmax....from the sender" should be removed and added after " $0 \leq Q < T1$ " in line 14 of claims 11 and 15 to define Qmax and Max;

- in claim 15, line 5, “with occupancy” should be added after “apparatus”;
line 6, “sender in a regular time interval (Dt) for controlling Tr” should be added after “the” to correspond to claim 13;
lines 7 and 9, “Q” should be changed to “storage apparatus” since threshold is established in the storage apparatus not occupancy Q, and occupancy level Q can be compared with T1/T2, not the storage apparatus;
line 11, “data storage” should be changed to “Q”;
- in claim 19, line 3, “a receiver” should be changed to “the receiver”;
line 5, “with occupancy” should be added after “apparatus”;
lines 9-12, “Q” should be changed to “storage apparatus” since threshold is established in the storage apparatus not occupancy Q, and occupancy level Q can be compared with T1/T2, not the storage apparatus;
- in claim 21, lines 3-4, “the maximum” should be changed to “a maximum” and “where Qmax....from the sender” should be removed and added after “ $0 \leq Q < T1$ ” in line 17 of claim 19 to define Qmax and Max.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the limitation "the first processing apparatus" in lines 4-5 lacks antecedent basis for this limitation in the claim. The office is treating this limitation as "the receiver processing apparatus."

In addition, in claim 1, the limitation "an updated transmit fraction" in line 8 of the claim is vague and indefinite. It cannot be determined from the claimed language as whether an updated transmit fraction is the same as the updated transmit rate in lines 6-7. If so, why are they being called differently? Since the preamble calls for determining a transmit rate from a sender and the updated transmit rate is generated by the threshold apparatus in lines 6-7 of the claim, the office is treating this limitation as "the updated transmit rate." Likewise, in line 2 of claim 7, "the updated transmit fraction" is interpreted as "the updated transmit rate."

In claims 4 and 5, the limitation "the updated transmit fraction apparatus" in line 1 lacks antecedent basis for this limitation in the claim. The office is treating this limitation as "the threshold apparatus," see specification on page 6, lines 23-page 7, line 2.

In claims 4-6, the limitation "a first selected transmit fraction update" in lines 3-4 of claim 4, the limitation "a second selected credit update value" in lines 3-4 of claim 5, and the limitation "a third selected credit update value" in line 3 of claim 6 are vague and indefinite. It cannot be determined from the claimed language as whether these limitations refer to different value of the updated transmit rate recited in lines 6-7 of claim 1. The office is treating these

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limitations as “a first transmit rate update,” “a second transmit rate update,” and “a third transmit rate update,” respectively.

In claim 9, the limitation "the thresholds" in lines 2-3 lacks antecedent basis for this limitation in the claim. The office is treating this limitation as “thresholds.”

In claim 10, the limitations "the receiver" in line 2 and “the update transmit rate register” in line 3 lack antecedent basis for this limitation in the claim. The office is treating these limitations as “a receiver” and “an updated transmit rate register,” respectively.

In claims 11, 15, and 19, the limitation "the queue" in line 11 of claims 11 and 15, and line 13 of claim 19 lacks antecedent basis for this limitation in the claims. The office is treating this limitation as “the storage apparatus.”

In claim 15, the limitation "the sender" in line 3 lacks antecedent basis for this limitation in the claim. The office is treating this limitation as “a sender.”

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1 and 4-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Davis et al. (“Davis”) (USPN 6,385,168 B1).

Regarding claim 1, as shown in Fig. 2, Davis teaches a credit-based system comprising:

Receiver processing apparatus (an input port on queue 22) which receives data packets (ATM cells). See col. 5, ll 10-13.

Storing apparatus (queue 22) which receives and stores the data packets from the receiver processing apparatus. See col. 5, ll 10-20.

Threshold apparatus (ER algorithm 28) for updating transmit rate (the offered cell rate OCR_i value in the Explicit Rate ER) with fixed period (periodically) coupled to a register apparatus (an inherent device that must receive the OCR_i value from the ER algorithm 28 as shown in Fig. 2 for RM cell processing) for receiving the updated transmit rate (the offered cell rate OCR_i value in the Explicit Rate ER). See col. 5, ll 25-col. 6, ll 22, also col. 2, ll 18-24.

Apparatus (an inherent apparatus that must write the OCR_i value into the ER field of the backward RM cell 34 and transmit the cell 34 to the source) for communicating the updated transmit rate to a sender. See col. 6, ll 12-22, also col. 2, ll 22-24.

Regarding claim 4, Davis further teaches that the threshold apparatus (ER algorithm 28 in Fig. 2) further comprises an inherent first logic apparatus which calculates a first selected transmit rate update (OCR_i calculated using eq. $g(QD, T1, T2 \text{ when } T1 \geq QD > T2)$) where the storing apparatus (queue 22) contains a quantity of the data packets between thresholds $T1$ ($T2$) and $T2$ ($T1$). See col. 5, ll 16-20, 25-28, 40-col. 6, ll 22.

Regarding claim 5, Davis further teaches that the threshold apparatus (ER algorithm 28 in Fig. 2) further comprises an inherent second logic apparatus which calculates a second selected transmit rate update (OCR_i calculated using eq. $g(QD, T1, T2 \text{ when } QD \leq T2)$) where the storing apparatus (queue 22) contains a quantity of the data packets less than $T1$ ($T2$). See col. 5, ll 16-20, 25-28, 40-col. 6, ll 22.

Regarding claim 6, Davis further teaches that the threshold apparatus (ER algorithm 28 in Fig. 2) further comprises an inherent third logic apparatus which calculates a third selected transmit rate update (OCR_i calculated using eq. $g(QD, T1, T2)$ when $QD > T1$) where the storing apparatus (queue 22) contains a quantity of the data packets greater than $T2$ ($T1$). See col. 5, ll 16-20, 25-28, 40-col. 6, ll 22.

Regarding claim 7, Davis further teaches second processing apparatus (the source) to which the updated transmit rate is communicated, col. 6, ll 11-22.

Regarding claim 8, Davis also teaches communication apparatus (the backward cell flow 36 in Fig. 2) which transmits the updated transmit rate (the offered cell rate OCR_i value in the Explicit Rate ER) to the sender (the source), col. 6, ll 11-22.

Regarding claim 9, it is inherent that the system of Davis (Fig. 2) must include a threshold setting apparatus which at initialization selects the values of the thresholds $T1$ and $T2$ set in the storage apparatus (the queue 22), col. 5, ll 10-20 and 37-52.

Regarding claim 10, Davis teaches connecting apparatus (the backward cell flow 36 in Fig. 2) which connects the register apparatus (an inherent device that must receive the OCR_i value from the ER algorithm 28 as shown in Fig. 2 for RM cell processing) in a receiver to an updated transmit rate register in the sender (the source must include an updated transmit rate register for receiving the RM containing OCR_i sent via the backward cell flow 36). See col. 6, ll 11-22.

Allowable Subject Matter

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9. Claims 2-3, 12-14, 16-18, and 20-22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. Claims 11, 15, and 19 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nittaya Juntima
August 30, 2005
NJ


RICKY NGO
PRIMARY EXAMINER
9/6/05